

What is claimed is:

1. A scanning optical system, comprising:

a light source that emits a plurality of beams;

a deflector disposed on optical paths of said beams emitted from said light source, said deflector deflecting said beams toward an object surface so that beam spots formed by said beams scan on said object surface in a main scanning direction; and

a birefringent double-image member disposed on said optical paths of said beams, said birefringent member splitting each of said beams into an ordinary ray and an extraordinary ray displaced from said ordinary ray in an auxiliary scanning direction to travel in a vicinity of said ordinary ray, said auxiliary scanning direction being perpendicular to the main scanning direction.

2. The scanning optical system according to claim 1, wherein said birefringent double-image member is configured such that each extraordinary ray travels in a direction slightly inclined against a direction in which the corresponding ordinary ray travels.

3. The scanning optical system according to claim 2, further comprising:

a collimator disposed between said light source and said deflector, said collimator converting said beams emitted from said light source from divergent lights into collimated lights;

a line image forming lens disposed between said collimator and said deflector, said beams being converged by said line image forming lens in the auxiliary scanning direction to form a line image in a vicinity of said deflector; and

an image forming optical system disposed between said deflector and the object surface, said beams deflected by said deflector being converged by said image forming optical system in a vicinity of the object surface in both the main and auxiliary scanning direction,

wherein said birefringent double-image member is disposed between said collimator and said line image forming lens.

4. The scanning optical system according to claim 2, wherein said birefringent double-image member has a wedge like form.

5. The scanning optical system according to claim 1, wherein said birefringent double-image member is configured such that each extraordinary ray travels in parallel with

the corresponding ordinary ray.

6. The scanning optical system according to claim 5, further comprising:

a collimator disposed between said light source and said deflector, said collimator converting said beams emitted from said light source from divergent lights into collimated lights;

a line image forming lens disposed between said collimator and said deflector, said beams being converged by said line image forming lens in the auxiliary scanning direction to form a line image in a vicinity of said deflector; and

an image forming optical system disposed between said deflector and the object surface, said beams deflected by said deflector being converged by said image forming optical system in a vicinity of the object surface in both the main and auxiliary scanning direction,

wherein said birefringent double-image member is disposed between said line image forming lens and said deflector.

7. The scanning optical system according to claim 5, wherein said birefringent double-image member is a plate having parallel surfaces.

8. The scanning optical system according to claim 1,  
wherein said beams emitted from said light source are linearly polarized, and  
wherein a quarter-wave plate is disposed between said light source and said birefringent double-image member.
9. The scanning optical system according to claim 8,  
wherein said light source is a semiconductor laser.
10. The scanning optical system according to claim 8,  
further comprising a second quarter-wave plate disposed between said birefringent double-image member and said deflector.
11. The scanning optical system according to claim 1,  
wherein said beams emitted from said light source are linearly polarized, and  
wherein a half-wave plate is disposed between said light source and said birefringent double-image member, said half-wave plate adjusting a polarized direction of each of said linearly polarized beams so as to make an angle of  $45^\circ$  with an optic axis of said birefringent double-image member.

12. The scanning optical system according to claim 11, wherein said light source is a semiconductor laser.

13. The scanning optical system according to claim 11, further comprising a quarter-wave plate disposed between said birefringent double-image member and said deflector.